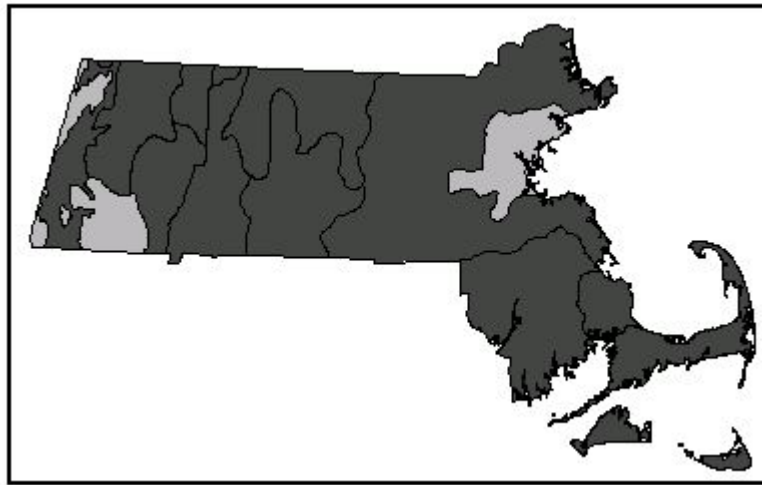


Community Name: LEVEL BOG
Community ELCODE: CP2B0C1000
SRANK: S3



- Concept:** Acidic dwarf ericaceous shrub peatlands, generally with pronounced hummock-hollow topography. Level bogs are the most acidic and nutrient-poor of Massachusetts' peatland communities.
- Environmental setting:** Level bog communities receive little or no streamflow and they are isolated from the water table, making them the most acidic and nutrient-poor of peatland communities. The pH of level bogs is in the range of 3 to 4. Level bogs develop along pond margins, at the headwaters of streams, or in isolated valley bottoms without inlet or outlet streams.
- Vegetation Description:** Level bogs are characterized by a mixture of tall and short shrubs that are predominantly ericaceous (i.e. members of the Heath family). Leatherleaf (*Chamaedaphne calyculata*) is dominant. Other typical ericaceous shrubs include rhodora (*Rhododendron canadense*), sheep laurel (*Kalmia angustifolia*), bog laurel (*Kalmia polifolia*), bog rosemary (*Andromeda polifolia* var. *glaucophylla*), Labrador tea (*Ledum groenlandicum*), and low-growing large and small cranberry (*Vaccinium macrocarpon* and *V. oxycoccus*). Scattered, stunted coniferous trees, primarily tamarack (*Larix laricina*) and black spruce (*Picea mariana*), occur throughout. A mixture of specialized bog plants grow on the hummocky Sphagnum surface, including carnivorous pitcher plants (*Sarracenia purpurea*) and sundews (*Drosera rotundifolia* and *D. intermedia*).
- Associations:** Five associations have been described in Massachusetts. They are: 1. *Vaccinium corymbosum*-*Rhododendron viscosum* tall shrub bog and bog border association [TYPE A in Kearsley, 1999c], 2. *Vaccinium corymbosum*-*Rhododendron canadense*-*Ledum groenlandicum* tall shrub bog association [TYPE B in Kearsley, 1999c], 3. A *Chamaedaphne calyculata*-*Kalmia polifolia*-*Maianthemum trifolium* dwarf ericaceous shrub bog association [TYPE C in Kearsley, 1999c], 4. *Chamaedaphne calyculata* dwarf ericaceous shrub bog association [TYPE D], and 5. *Vaccinium oxycoccus*-*Rhynchospora alba*-*Utricularia cornuta* open sphagnum lawn association [TYPE E].
- Habitat values for Associated Fauna:** The high acidity and low oxygen content of the water make level bogs inhospitable to many reptiles, fish, and amphibians. However, several of the state's protected rare animal species are found in level bogs. Moats or pools associated with level bogs can provide important amphibian breeding habitat and function as vernal pools if they have two to three months of ponding and lack fish.

Associated rare plants:

| | | |
|------------------------|----------------------------|------|
| ARCEUTHOBIMUM PUSILLUM | DWARF MISTLETOE | SC |
| CAREX LIMOSA | MUD-SEDGE | - WL |
| SCHEUCHZERIA PALUSTRIS | POD-GRASS | T |
| XYRIS MONTANA | NORTHERN YELLOW-EYED GRASS | - WL |

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Associated rare animals:

| | | |
|--------------------------|---------------------------------|----|
| AESHNA MUTATA | SPATTERDOCK DARNER | E |
| AMBYSTOMA JEFFERSONIANUM | JEFFERSON SALAMANDER | SC |
| AMBYSTOMA LATERALE | BLUE-SPOTTED SALAMANDER | SC |
| LITHOPHANE VIRIDIPALLENS | PALE GREEN PINION MOTH | SC |
| METARRANTHIS PILOSARIA | COASTAL SWAMP METARRANTHIS MOTH | SC |
| PAPAPEMA APPASSIONATA | PITCHER PLANT BORER MOTH | SC |
| WILLIAMSONIA FLETCHERI | EBONY BOGHAUNTER | E |
| WILLIAMSONIA LINTNERI | RINGED BOGHAUNTER | E |

**Examples with
Public Access:**

Ponkapoag Bog Reservation MDC, Canton; Poutwater Pond, MDC, Sterling.

Threats:

Hydrologic alteration and nutrient enrichment from road and lawn runoff. Trampling from humans affects peat mat integrity.

Management needs:

Public should be encouraged to visit only those sites with established boardwalks. Signs need to be posted along boardwalks encouraging visitors to stay off the peat mat. Monitor the impact of salt and other nutrient runoff into bogs, and work to minimize runoff. Remove phragmites where it has become established.

Synonyms

USNVC/TNC:

Includes *Vaccinium corymbosum*/Sphagnum spp. Shrubland ; *Picea mariana*/Kalmia angustifolia/Sphagnum spp. Forest; *Picea mariana*/Sphagnum spp. (Lower New England /Northern Piedmont, North Atlantic Coast) Woodland ; *Kalmia angustifolia*-*Chamaedaphne calyculata* (*Picea mariana*)/*Cladina* dwarf-shrubland.

MA [old name]:

SNE Level Bog [CP2C2A0000].

ME:

Includes and related to: 2001 – Sheep Laurel Dwarf Shrub Bog and Bog Moss Lawn. 1991 - Dwarf shrub bog community.

VT:

Dwarf shrub bog.

NH:

similar to Coastal/southern dwarf shrub bog and to Boreal/transitional dwarf shrub bog.

NY:

Dwarf shrub bog.

CT:

Chamaedaphne calyculata dwarf shrubland s.

RI:

Dwarf shrub bog.

Golet & Larson, 1974:

Other:

Author:

J. Kearsley

Date:

7/21/99